

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

IN RE MUSHROOM DIRECT	:	Master File NO. 06-0620
PURCHASER ANTITRUST	:	
LITIGATION	:	
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THIS DOCUMENT RELATES TO:	:	
ALL ACTIONS	:	
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O'NEILL, J.	:	August 5, 2015

MEMORANDUM

Presently before me in this antitrust litigation are the Eastern Mushroom Marketing Cooperative (EMMC) defendants' motion to exclude the expert opinions of Dr. Keith Leffler offered on behalf of plaintiffs Publix Supermarkets, Inc. and Giant Eagle, Inc. (opt-out plaintiffs) (Dkt. No. 516), defendant M.D. Basciani's motion to exclude Dr. Leffler's opinions (Dkt. No. 520), opt-out plaintiffs' response (Dkt. No. 532), EMMC defendants' reply (Dkt. No. 551), M.D. Basciani's reply (Dkt. No. 555), opt-out plaintiffs' surreply (Dkt. No. 572) and EMMC defendants' surreply (Dkt. No. 577). On March 24 and 25, 2015, I held a Daubert hearing on this matter. For the reasons that follow, I will deny defendants' motions.

BACKGROUND

Opt-out plaintiffs allege that the EMMC conspired to set minimum prices and established a supply control program for fresh agaricus mushrooms. Opt-out plaintiffs have submitted an expert report by Dr. Leffler as evidence of anticompetitive impact and damages they allegedly suffered due to the EMMC's policies. See Leffler Rpt. Dr. Leffler is a Ph.D. economist and a retired professor of economics with extensive experience testifying in the field of antitrust economics. See id. at ¶ 1. Dr. Leffler's reports are based on two multi-variable regression analyses, one for each opt-out plaintiff, which attempt to isolate and quantify the impact caused

by and damages resulting from defendants' policies on mushroom prices. See id. at ¶¶ 54-60. The EMMC defendants have submitted an expert report by Dr. Jesse David which opines on the reliability of Dr. Leffler's regression modeling. See David Rpt. M.D. Basciani has also submitted an expert report by Dr. Rigoberto Lopez, which includes opinions attacking the reliability of Dr. Leffler's regression modeling. See Lopez Rpt. Dr. Leffler submitted a rebuttal report responding to defendants' experts' criticisms of his opinions. See Leffler Reb. Rpt.

Before turning to the issues raised by defendants' motions, I will briefly describe regression analysis and Dr. Leffler's particular regression models. "Multiple regression analysis is the comparing of variables to determine the influence that one variable, the independent or explanatory variable, has on another variable, the dependent variable." In re Chocolate Confectionary Antitrust Litig., 289 F.R.D. 200, 211-12 (M.D. Pa. 2012). "By controlling for other factors that might influence the dependent variable, one 'regresses' the influence of the independent variable on the dependent variable. The number associated with that influence is called a 'coefficient.'" Reed Const. Data Inc. v. McGraw-Hill Cos, Inc., No. 09-8578, 2014 WL 4746130, at *3 (S.D.N.Y. Sept. 24, 2014). "There is no dispute that when used properly multiple regression analysis is one of the mainstream tools in economic study and it is an accepted method of determining damages" and impact in antitrust cases. In re Flat Glass Antitrust Litig., 191 F.R.D. 472, 486 (W.D. Pa. 1999) (collecting cases).

Dr. Leffler ran separate regression models for opt-out plaintiffs Giant Eagle and Publix. See Leffler Rpt. at ¶ 56. Dr. Leffler's original model includes supply and demand variables controlling for family food expenditure and family income, industrial electricity, chemical fertilizer and farm wages. See id. at ¶ 54. In his final model, Dr. Leffler substituted hay as a possibly more accurate predictor of the cost of compost rather than chemical fertilizer. See

Leffler Reb. Rpt. at ¶ 8, Table 1C. Dr. Leffler also ran his model separately incorporating the rebuttal suggestions from Dr. David and Dr. Lopez that he deemed were appropriate. See id.; Tables 1A-1B.

Dr. Leffler's model distinguishes between competitive "benchmark" periods and "conduct" periods, to create "an evidentiary foundation for inferring what the prices would have been in the [conduct] period[s] but for the illegal activity." In re Live Concert Antitrust Litig., 863 F. Supp. 2d 966, 974 (C.D. Cal. 2012), citing 2A P. Areeda & H. Hovenkamp, Antitrust Law ¶ 399b, p. 446 (3d ed. 2006). There are various differences between the underlying data for Publix and Giant Eagle which led Dr. Leffler to make different benchmark assumptions for each model. See generally Lopez Rpt. at ¶ 30, Figure 7 (diagramming the timeline of events in Dr. Leffler's models). In the Publix model, Dr. Leffler defines the competitive period as running from the time when pricing data for Publix begins in March 1999 until the EMMC minimum pricing policy went into effect in February 2001. Leffler Rpt. at ¶ 59. The Publix conduct period is defined to include both the time when the EMMC minimum pricing policy existed from February 2001 through [REDACTED] 2005 and the three years and four months following the suspension of that policy until [REDACTED] Id.

The Giant Eagle model includes a pre-conspiracy competitive period from January 2000 through January 2001. Id. The first Giant Eagle conduct period lasts from February 2001, reflecting the beginning of the EMMC minimum pricing policy, until [REDACTED] 2003. Unlike for Publix, Dr. Leffler then includes a competitive benchmark period from [REDACTED] 2003 until [REDACTED] 2004 to account for increased competition resulting from a reverse internet auction that Giant Eagle conducted and that Leffler determined achieved substantially competitive pricing. See Leffler Rpt. at ¶ 57. Dr. Leffler also included a competitive period, or as Dr. Lopez calls it a

“semi-conspiracy conduct” period, Lopez Rpt. at ¶ 30, from [REDACTED] 2004 until [REDACTED] to reflect the lingering competitive impact on prices following the auction. See Leffler Rpt. at ¶ 57. Finally, Dr. Leffler included a second conduct period from [REDACTED] until [REDACTED] to reflect that prices were set during that period based on a contract entered into in 2007 rather than the competitive auction. Id. As a result of these considerations, the Giant Eagle model includes different overcharge calculations for different periods of time after the beginning of the EMMC minimum pricing policy in February 2001, while the Publix model generates a single overcharge calculation. See id. at ¶¶ 58-59. Dr. Leffler concludes, depending on which of Dr. Lopez and Dr. David’s suggested control variables are incorporated, that damages range from [REDACTED] [REDACTED] for Giant Eagle and [REDACTED] for Publix. See Leffler Reb. Rpt. at ¶ 3; Tables 1A-1C.

STANDARD OF REVIEW

Federal Rule of Evidence 702 governs the admissibility of expert testimony. When faced with expert testimony, the district court acts “as a gatekeeper to ensure that the expert’s opinion is based on the methods and procedures of science rather than on subjective belief or unsupported speculation.” ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254, 290 (3d Cir. 2012) (internal quotations omitted). Rule 702 provides that:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. In short, Rule 702 “embodies a trilogy of restrictions on expert testimony: qualification, reliability and fit.” Schneider ex rel. Estate of Schneider v. Fried, 320 F.3d 396, 404 (3d Cir. 2003).

First, expert qualification “refers to the requirement that the witness possess specialized expertise.” Schneider, 320 F.3d at 404. The Court of Appeals has “interpreted this requirement liberally, holding that a broad range of knowledge, skills, and training qualify an expert.” Id. Second, the Court of Appeals has “made clear” that “the reliability analysis required by Daubert applies to all aspects of an expert’s testimony: the methodology, the facts underlying the expert’s opinion, and the link between the facts and the conclusion.” ZF Meritor, 696 F.3d at 291 (internal quotations omitted). Third, the requirement of “fit” means that “the expert’s testimony must be relevant for the purposes of the case and must assist the trier of fact.” Schneider, 320 F.3d at 404. The party offering the testimony bears the burden of demonstrating compliance with Rule 702. See Mercedes-Benz USA, Inc. v. Coast Auto. Grp., Ltd., 362 F. App’x 332, 335 n.2 (3d Cir. 2010).

Under Daubert and Rule 702, “[p]roponents of expert testimony do not have to prove their case twice—they do not have to demonstrate to the judge by a preponderance of the evidence that the assessments of their experts are correct, they only have to demonstrate by a preponderance of evidence that their opinions are reliable.” In re DVI, Inc. Sec. Litig., No. 03-5336, 2014 WL 4634301, at *5 (E.D. Pa. Sept. 16, 2014) (emphasis in original), citing In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 744 (3d Cir. 1994). Thus, Daubert “focuses on principles and methodology, not on the conclusions generated by principles and methodology.” In re TMI Litig., 193 F.3d 613, 665 (3d Cir. 1999) amended, 199 F.3d 158 (3d Cir. 2000).

DISCUSSION

I. EMMC Defendants' Motion

A. Dr. Leffler's Regression Analysis

EMMC defendants contend that Dr. Leffler's multiple regression models are inadmissible under Rule 702. Dr. Leffler's qualification to testify as an expert in this case is not at issue. The parties do not dispute that multi-variable regression analysis is a proper method of estimating antitrust injury and damages in this case. Instead, EMMC defendants contend that Dr. Leffler's regression models have numerous defects that render them inadmissible, namely: (1) omitted control variables, (2) ineffective control variables, (3) false positive results and (4) improper factual assumptions about the timeline of events underlying the models.¹ At the outset, it is important to consider that since economics and econometrics are disciplines that "require the use of professional judgment, expert testimony [in those fields] is less likely to be excluded because challenges may ultimately be viewed as matters in which reasonable experts may differ." In re Air Cargo Shipping Servs. Antitrust Litig., No. 06-1175, 2014 WL 7882100, at *8 (E.D.N.Y. Oct. 15, 2014). Indeed, "[a] somewhat unique body of law has developed governing whether and under what circumstances statistical analysis proffered by an expert—and, in particular, regression analyses . . . pass muster under Rule 702." In re Live Concert, 863 F. Supp. 2d at 973.

1. Omitted Control Variable Bias

EMMC defendants contend that Dr. Leffler's regression models are unreliable because he omitted control variables for mushroom farm closings that EMMC defendants contend reduced

¹ EMMC defendants also argue that I should preemptively bar Dr. Leffler from offering relevant market testimony because he did not opine on the relevant product or geographical markets in his reports. Dkt. No. 516 at 30-32. It is premature to consider this issue because opt-out plaintiffs have yet to offer opinions by Dr. Leffler regarding the relevant markets in this case. Thus, I decline to consider this issue on the instant motions. EMMC defendants may reassert their argument if and when it is appropriate.

the supply of mushrooms before and during Dr. Leffler's conduct periods. Dkt. No. 516 at 13. Specifically, EMMC defendants contend that nine mushroom farms closed between 1999 and 2006, providing an alternative explanation for rising prices notwithstanding the EMMC's minimum pricing policies or supply control program. Id. Opt-out plaintiffs respond that (1) Dr. Leffler's model statistically incorporates farm closings as an endogenous² variable to supply and (2) dispute the factual premise that the farm closings caused a reduction in supply in the fresh agaricus mushroom market.

A regression analysis must account for all of the major variables, but "[n]ormally, failure to include variables will affect the analysis' probativeness, not its admissibility." Bazemore v. Friday, 478 U.S. 385, 400 (1986). Applying Bazemore to the antitrust context, "it is only the rare case where the regressions are so incomplete as to be irrelevant and the expert's decisions regarding control variables are the basis to exclude the analysis." In re Linerboard Antitrust Litig., 497 F. Supp. 2d 666, 678 (E.D. Pa. 2007).

First, Dr. Leffler has sufficiently demonstrated, at least for the purposes of Rule 702 and Daubert, that mushroom farm closings are endogenous to his model. At the Daubert hearing, Dr. Leffler adequately established for purposes of the reliability inquiry that a separate control variable for farm closings is not necessary where such closings are driven by price pressure rather than some independent intervening event such as a natural disaster. Dkt. No. 664 at ECF 38-40. Indeed, Dr. Leffler considered that substantially more than nine farms entered and exited

² By "endogenous" Dr. Leffler means that it is a factor that is included by his model because it is driven by "economically driven changes in supply" that are accounted for in his model. See Dkt. No. 664 at ECF 38. An "exogenous" factor is something that is "not a price driven economic decision" such as an act of God that must be separately accounted for in the model. Id. at ECF 39.

the market during the relevant time period and that they were accounted for economically in his model. Id. at ECF 40.

Dr. David contends that farm closings are an exogenous variable that must be accounted for by Dr. Leffler's model independently. Dkt. No. 663 at ECF 64. But defendants and their experts have not provided alternative variables or attempted any alternative regression analysis that would account for the farm closings and that might "weaken the results of [Leffler's] analysis." In re Indus. Silicon Antitrust Litig., No. 95-1131, 1998 WL 1031507, at *9 (W.D. Pa. Oct. 13, 1998); see also In re Live Concert, 863 F. Supp. 2d at 974. At the Daubert hearing Dr. David did propose that the age of farms could have been included as another variable in Dr. Leffler's model that might have accounted for economic factors related to the closing of the nine farms at issue. Dkt. No. 663 at ECF 64-65. Defendants "cannot exclude a regression analysis, however, simply by pointing to variables not taken into account." Mehus v. Emporia State Univ., 222 F.R.D. 455, 462 (D. Kan. 2004); In re Indus. Silicon, 1998 WL 1031507, at *9. "Rather, the challenging party must introduce evidence to support its contention that the failure to include those variables would actually change the outcome of the analysis." In re Indus. Silicon, 1998 WL 1031507, at *9; In re Polypropylene Antitrust Litig., 93 F. Supp. 2d 1348, 1365 (N.D. Ga. 2000). Defendants have not provided evidence leading me to conclude that the omission of farm age or any other identifiable variable rendered Dr. Leffler's models unreliable. Rather, defendants' omitted variable bias arguments go to the ultimate probativeness rather than the reliability of Dr. Leffler's models.

Third, opt-out plaintiffs have sufficiently shown that, even if farm closings were an omitted variable, such an omission would not render Dr. Leffler's model "so incomplete as to be irrelevant" to the questions of antitrust injury and damages in this case. In re Linerboard, 497 F.

Supp. 2d at 678. Indeed, at the Daubert hearing, there was a dispute regarding the actual impact of mushroom farm closings on the quantity of fresh agaricus mushrooms sold in the market during the relevant time period. Dkt. No. 663 at ECF 132. Dr. Leffler made reasonable determinations regarding the need to control for those closings in his model. Thus, I will not exclude Dr. Leffler's regression model on the basis of omitted control variables.

2. Ineffective Control Variables

EMMC defendants also contend that the control variables Dr. Leffler uses in his regression models have no logical relationship with mushroom prices and that therefore the models cannot reliably demonstrate defendants' conduct was a but-for cause of price increases or accurately estimate damages. Defendants contend that Dr. Leffler's variables are so ineffective that they amount to having no control variables at all and therefore are inadmissible under Daubert. Of course, EMMC defendants are correct that a regression model must contain some effective control variables to be reliable, or else it would simply be a comparison of prices during the benchmark period to the conduct period. See In re Aluminum Phosphide Antitrust Litig., 893 F. Supp. 1497, 1504 (D. Kan. 1995) (stating "one cannot properly assume that the sole cause of any price difference between the conspiracy period and the normative period is the conspiracy itself"); Blue Dane Simmental Corp. v. Am. Simmental Ass'n, 178 F.3d 1035, 1040 (8th Cir. 1999).

Specifically, defendants argue that because some of Dr. Leffler's cost variables exhibit negative relationships with mushroom prices that his model must be unreliable. However, Dr. Leffler contends that the negative signs in his model are due to high multicollinearity – which exists when independent variables are highly correlated with each other. See Leffler Reb. Rpt. at ¶ 8. As EMMC defendants admit, "multicollinearity is one possible cause of obtaining the

wrong signs on control variables, using meaningless control variables is another.” Dkt No. 516 at 20. Dr. David also stated in his deposition and at the Daubert hearing that multicollinearity was a possible explanation for negative signs on Dr. Leffler’s control variables. See Dkt. No. 663 at ECF 57; Dkt No. 516 at 20, citing David Dep. at 57:25-58. There must be more than a mere possibility that Dr. Leffler’s model is unreliable in order to exclude it from the jury’s consideration. Additionally, as a further check of reliability due to the negative signs on some of his variables, Dr. Leffler tested his variables as a group and found that they were statistically significant at over the ■■■ percent level. See Leffler Reb. Rpt. at ¶ 10. While defendants dispute the weight that should be given to that significance testing, opt-out plaintiffs have carried their burden to establish reliability and defendants’ criticisms are best left for the factfinder to consider.

Further, defendants have not shown any alternative cost variables that would create a more predictive model or weaken Dr. Leffler’s results. Indeed, Dr. Leffler’s final model contained in his rebuttal report incorporated cost variables that defendants’ experts suggested as more accurate predictors of mushroom prices, such as substituting hay prices for chemical fertilizer as a stand-in variable for the costs of compost. See id. at ¶ 8. Dr. Leffler concedes that even hay price is not a perfect predictor of compost costs since mushroom farms make their own compost from hay that is a horse farming byproduct. Id.; Dkt. No. 664 at ECF 73-74. While there may be questions as to the probativeness of Dr. Leffler’s damages models, they can be subjected to vigorous cross-examination at trial. Dr. Leffler’s choice of cost control variables has at least a logical relationship to mushroom prices since it controls for costs that are indisputably pertinent to mushroom production such as electricity, heating fuel, hay (as a stand in for composting costs) and labor. See id. at Table 1A-C. Dr. Leffler has shown that his model is

not equivalent to one that functionally has no cost control variables at all and indeed has shown that his conclusions are largely unaffected by incorporating alternative variables suggested by defendants. Thus, I will not exclude Dr. Leffler's model based upon his choice of control variables.

3. False Positives

Dr. David found that Dr. Leffler's model generates false positive overcharges for mushroom sales in California, sales that he opines were not affected by the EMMC's minimum pricing policies because they were "outside the EMMC's territory." David Rpt. at ¶ 71; Dkt. No. 516 at 21. Dr. Leffler provides several potential explanations for the false positive results. First, he contends that prices in the Western United States may be related to EMMC prices because Pennsylvania growers alone make up 60 percent of total U.S. supply.³ See Leffler Reb. Report ¶ 12, n.25. Second, Dr. Leffler argues the data used by Dr. David from [REDACTED] was not in fact "out of sample" since [REDACTED] was also a member of both the WMMA, which covered California, and a member of the EMMC. *Id.* Third, Dr. Leffler considers that the WMMA might have engaged in price fixing itself, since its bylaws are modeled on the EMMC. *Id.*

Defendants cite In re Rail Freight Fuel Surcharge Antitrust Litig.-MDL No. 1869, 725 F.3d 244, 254 (D.C. Cir. 2013) to support the exclusion of Dr. Leffler's models based on Dr. David's false positive test. As defendants recognize, however, Rail Freight was a decision on class certification, not the admissibility of expert testimony under Rule 702 and Daubert. Further, in Rail Freight the false positive analysis relied upon comparison to a group of shippers "indisputably unaffected by the conspiracy" that is not apparent here because "the task is

³ "The members of the EMMC, including the individual defendants in this case, operate(d) primarily from farms in the eastern U.S., particularly Pennsylvania (see Exhibit 1)." David Rpt. at ¶ 14.

considerably more complex” given the potential that the WMMA set minimum prices for mushrooms in the Western United States and that [REDACTED] was a member of both the EMMC and the WMMA. Allen v. Dairy Mktg. Servs., LLC, No. 5:09-230, 2013 WL 6909953, at *17 (D. Vt. Dec. 31, 2013) (denying Daubert motion to an exclude expert’s regression analysis on the basis of false positives and distinguishing Rail Freight). Thus, while the false positive results generated by Dr. David might call into question Dr. Leffler’s models as ultimate proof of injury and damages, they do not render Dr. Leffler’s model inadmissible.

4. Timeline of Events

EMMC defendants contend that Dr. Leffler’s model is based upon various oversimplifications and improper assumptions about how prices were actually determined between defendants and opt-out plaintiffs and about the relevant timeline of events with respect to Dr. Leffler’s choice of conduct and competitive periods. Specifically, defendants argue there are four problems with Dr. Leffler’s model: (1) Dr. Leffler assigns an overcharge to Giant Eagle’s price adjustment for [REDACTED] in 2004⁴, (2) Dr. Leffler’s model uses improper benchmarks because it extends the anticompetitive period past the effective dates of the EMMC minimum pricing policy, (3) Dr. Leffler makes unexplained assumptions about competitive and anticompetitive periods for Giant Eagle, (4) Dr. Leffler arbitrarily assigned a single average overcharge for Publix but allowed the Giant Eagle overcharge to vary based on different periods of conduct. See Dkt. No. 516 at 25-28. Essentially, defendants contend that Dr. Leffler’s model is based upon arbitrary assumptions about the factual events underlying opt-out plaintiffs’ buying practices and the EMMC’s conduct periods.

⁴ I agree with opt-out plaintiffs that the relevant question is not whether the price adjustment Giant Eagle granted [REDACTED] was voluntary but whether Giant Eagle paid a higher but-for price due to the alleged conspiracy and will not conclude Dr. Leffler’s model is unreliable on this basis. See Dkt. No. 532 at 19-20.

It is important to remember, however, that statistical “[m]odels are not the real world; rather, such models are a reasoned and educated attempt to describe reality by accepted methods of statistical analysis using available real world observations, data, and knowledge. The process is not like a Pythagorean demonstration of a mathematical truth that can be revealed indisputably.” In re Air Cargo, 2014 WL 7882100, at *8. Further, Daubert “does not preclude testimony merely because it may be based upon an assumption.” In re TMI Litig., 193 F.3d at 677. Instead, I am only to consider “the reliability of the expert’s method, which may properly include making assumptions so long as those assumptions are sufficiently grounded in available facts.” Edison Wetlands Ass’n, Inc. v. Akzo Nobel Chems., Inc., No. 08-419, 2009 WL 5206280, at *4 (D.N.J. Dec. 22, 2009). “To the extent [defendants] perceive weaknesses in these assumptions, these issues can be addressed on cross-examination.” Id. Assumptions are sufficiently grounded “so long as such assumptions have a reasonable basis in the available record.” Brill v. Marandola, 540 F. Supp. 2d 563, 568 (E.D. Pa. 2008). Generally, the “court should not consider the strength or weakness of the basis of an expert’s testimony, because ‘[r]ule 705, together with rule 703, places the burden of exploring the facts and assumptions underlying the testimony of an expert witness on opposing counsel during cross-examination.’” Inline Connection Corp. v. AOL Time Warner Inc., 470 F. Supp. 2d 435, 439 (D. Del. 2007), citing Stecyk v. Bell Helicopter Textron, Inc., 295 F.3d 408, 414 (3d Cir. 2002). Indeed, courts in other circuits have noted that “most contentions that [expert] assumptions are unfounded go to the weight, not the admissibility, of the testimony, and a district court has discretion . . . to determine whether the expert acted reasonably in making assumptions of fact upon which he would base his testimony.” In re Air Cargo, 2014 WL 7882100, at *15 (internal citations omitted).

Defendants' primary criticisms of Dr. Leffler's model based on the timeline of buying events and EMMC conduct relates to Dr. Leffler's choice of benchmark periods. Other courts have found that generally "criticisms . . . of potential benchmark years go to the weight of [] opinions and not their admissibility." In re Urethane Antitrust Litig., No. 04-1616, 2012 WL 6681783, at *6 (D. Kan. Dec. 21, 2012), aff'd, 768 F.3d 1245 (10th Cir. 2014). At the same time, "to be admissible, a regression analysis must examine an appropriate selection of data. When constructing a benchmark statistic, the regression analyst may not 'cherry-pick' the time-frame or data points so as to make her ultimate conclusion stronger." Reed Const. Data, 2014 WL 4746130, at *6.

Dr. Leffler has provided sufficient rationale for his decision to include a conduct period after the official cessation of EMMC minimum pricing agreement. For example, there is a sufficient basis to assume for purposes of Dr. Leffler's model that opt-out plaintiffs were bound to EMMC minimum prices by contract until May and June [REDACTED] for Giant Eagle and Publix respectively, after the formal dissolution of the minimum pricing policy in [REDACTED] 2005. See Leffler Reb. Rpt. at ¶ 16. There is also a sufficient factual basis, at least for Dr. Leffler to make an assumption upon which to ground his regression model at the Daubert stage, that a form of non-compete agreement between various EMMC members may have existed after the dissolution of the EMMC's official minimum pricing policies and that this agreement may have impacted prices. Leffler Rpt. at ¶¶ 29-30; Leffler Reb. Rpt. at ¶ 17. Dr. Leffler opines that because of this continuing anticompetitive conduct there could be conspiracy effects even after the end of contracts based on contracted prices extending past the official minimum pricing policy period and thus he calculates a separate lingering conspiracy variable from [REDACTED] and [REDACTED] of [REDACTED] through [REDACTED] for Giant Eagle and Publix respectively. Leffler Reb. Rpt. at

¶ 17. The underlying questions of fact are contested and are not suited for disposition through disputes over the reliability of an expert's econometric model at the Daubert stage. However, Dr. Leffler made reasonable assumptions about those underlying facts as the basis of his regression modeling.

It is counterintuitive that according to Dr. Leffler's models, the EMMC's post-minimum pricing agreement conduct was more effective at raising prices than the EMMC's conduct during the height of the EMMC's membership and minimum pricing policy. Dkt. No. 516 at 25-26. Dr. Leffler provides a conceptual explanation for that result – the details of the EMMC's alleged post-minimum pricing policy non-compete agreement amounted to a market allocation agreement that could have been more effective in raising prices than a minimum pricing policy agreement. Dkt. No. 664 at 58-59. Dr. David argues that the “proof is in the pudding,” Dkt. No. 664 at ECF 128, and that Dr. Leffler's results regarding the post-minimum pricing policy time period demonstrate the unreliability of his models. However, his argument is not consistent with the legal standard on Daubert, which “focuses on principles and methodology, not on the conclusions generated by principles and methodology.” In re TMI Litig., 193 F.3d at 665.

Regarding Dr. Leffler's choice to include a “more competitive” benchmark period in his Giant Eagle regression model to account for the effects of Giant Eagle's second reverse internet auction on prices, Dr. Leffler has at least provided a reasonable basis upon which he made that determination. Dkt. No. 664 at ECF 62. Dr. Leffler testified at the Daubert hearing that the buying event was unique due to the combination of the unique form of a reverse online auction, that such an auction was not contemplated by EMMC rules (rules which were subsequently changed to address internet auctions), the presence of at least one non-EMMC buyer in the auction and the extensive length of the auction and that he was therefore justified in treating it

differently within his model compared to other buying events. *Id.* at 62-64; 112. Differences between the Giant Eagle model and the Publix model identified by defendants ultimately go to the probativeness of the models and can be raised on cross-examination. But Dr. Leffler has sufficiently established that his models are reliable and sufficiently fit the facts of the case to be helpful to the jury. Thus, defendants' criticisms of Dr. Leffler's benchmark choices and their "timeline" arguments are issues to be tested on cross examination and go to the weight of Dr. Leffler's opinions rather than their admissibility.

II. M.D. Basciani's Motion

M.D. Basciani contends that (1) Leffler should be disqualified due to lack of credibility and (2) Dr. Leffler's expert opinions are unreliable.⁵ M.D. Basciani's substantive arguments

⁵ M.D. Basciani also argues that mathematical/programming mistakes in Dr. Leffler's report that he later corrected in his rebuttal report and at his deposition warrant excluding his opinions. Dkt. No. 520 at 2-3, 15-18; Leffler Reb. Rpt. at ¶ 13-15. M.D. Basciani moves to strike Dr. Leffler's "new versions of his report and additional data served after his original report" correcting those errors under Rule 26(e). *See* Dkt. No. 520 at 16 n.27. Although not discussed by M.D. Basciani, the Court of Appeals outlined the following factors to consider on motions to exclude experts' corrections to calculations and data contained in their initial reports:

- (1) the prejudice or surprise in fact of the party against whom the excluded witnesses would have testified or the excluded evidence would have been offered; (2) the ability of that party to cure the prejudice; (3) the extent to which allowing such witnesses or evidence would disrupt the orderly and efficient trial of the case or of other cases in the court; (4) any bad faith or willfulness in failing to comply with the court's order; and (5) the importance of the excluded evidence.

ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254, 298 (3d Cir. 2012) (internal citations omitted). I find that Dr. Leffler's corrections did not result in prejudice to M.D. Basciani or disrupt these proceedings and were not in bad faith. Particularly where a *Daubert* hearing was held after the submission of his corrections, M.D. Basciani had ample time to consider whether those corrections changed Dr. Leffler's methodology or ultimate conclusions in any significant way – which they did not – that might have caused prejudice. Indeed, "[t]here is no stigma attached to such error correction, nor should there be. If anything, it strengthens the quality of the expert

attacking the reliability of Dr. Leffler's report have already been addressed in the discussion of EMMC defendants' motion above and thus I will deny M.D. Basciani's motion on the same grounds. Next I will consider M.D. Basciani's argument that Dr. Leffler should be disqualified due to a lack of credibility. M.D. Basciani contends that other courts have found Dr. Leffler's testimony wanting at various stages of litigation besides on a Daubert motion and that this should lead me to exclude his testimony in this case. See Dkt. No. 520 at 5-6.

The credibility of experts is for the jury to determine. See LePage's Inc. v. 3M, 324 F.3d 141, 165 (3d Cir. 2003). I should not generally consider an expert's "credibility as a witness when assessing the reliability of his methods." Elcock v. Kmart Corp., 233 F.3d 734, 751 (3d Cir. 2000); see also In re Processed Egg Prods. Antitrust Litig., No. 08-2002, 2015 WL 337224, at *4 (E.D. Pa. Jan. 26, 2015) (following Elcock and declining to consider an expert's credibility at Daubert stage). The Court of Appeals has noted that certain exceptions exist where there is a close nexus between credibility and the methodology in question at the Daubert stage. See Elcock, 233 F.3d at 751 n.8 (giving the example of "prior dishonest acts involv[ing] fraud committed in connection with the earlier phases of a research project that serves as the foundation for the expert's proffered opinion."). These issues are for the jury and are appropriately brought out on cross-examination.

Regardless, defendants have not impugned Dr. Leffler's credibility. M.D. Basciani's only relevant support is a case in which a special master's report recommended the exclusion of Dr. Leffler's expert report: In re Intel Corp. Microprocessor Antitrust Litig., No. 05-485, 2010 WL 8591815 (D. Del. July 28, 2010). Dkt. No. 664 at ECF 87-88; Dkt. No. 532 at 6 (noting that report." Crowley v. Chait, 322 F. Supp. 2d 530, 540 (D.N.J. 2004). Thus, to the extent it is based Dr. Leffler's corrections to his reports, I will deny M.D. Basciani's motion to exclude Dr. Leffler's opinions.

the other cases cited by M.D. Basciani regarding Dr. Leffler's opinions were in different procedural postures than motions to exclude). The Court in that case did not adopt the special master's recommendation. See In re Intel Corp., 2012 WL 4497405, at *1 (D. Del. Sept. 28, 2012). Dr. Leffler testified at the Daubert hearing that none of his expert opinions calculating an overcharge with regression analysis have been excluded on a Daubert motion in an over forty-year career and defendants did not impeach that testimony. Dkt. No. 664 at ECF 29-30. Thus, I will deny M.D. Basciani's motion to exclude Dr. Leffler's opinions.

CONCLUSION

For the reasons stated above, I will deny defendants' motions to exclude Dr. Leffler's expert opinions in this case. Ultimately, defendants' criticisms of Dr. Leffler's report go to the degree and extent of impact of the EMMC's policies on prices but do not undermine the basic reliability or fit of Dr. Leffler's analysis. I am not "overly pessimistic about the capabilities of the jury and of the adversary system generally" with regard to Dr. Leffler's regression models. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 596 (1993). "Vigorous cross-examination, presentation of contrary evidence," and other checks on unreasonable jury determinations are sufficient here, where the reliability of the model has been sufficiently established and the assumptions underlying its construction have been justified. Id.

An appropriate Order follows.